

In the Claims

6. (Amended) A method for making a cell-matrix construct for use as a heart valve or blood vessel comprising

implanting into an animal at a first site a fibrous matrix [having sufficient interstitial spacing between fibers to allow tissue ingrowth after implantation of the matrix] formed of a synthetic biodegradable polymer having seeded therein a mixture of cells selected from the group selected from endothelial cells, myofibroblasts, skeletal muscle cells, vascular smooth muscle cells, myocytes, fibromyoblasts, and ectodermal cells, wherein the matrix is formed of a biocompatible, biodegradable polymer[,

removing the implanted matrix after a period of time sufficient to allow ingrowth of fibrous tissue or blood vessels into the matrix], and

implanting into an animal or human the matrix at a [second] site where the resulting cell-construct is needed.

8. (amended) The method of claim [7] 6 wherein the matrix is [seeded after removal of the matrix having ingrown tissue or blood vessels] first cultured at a first site in a patient prior to being implanted at a second site.

9. (amended) The method of claim [7] 6 wherein the matrix is [seeded prior to implantation of the fibrous matrix at the first site] a heart valve and is implanted in the heart.

10. (amended) The method of claim 6 wherein the cell-matrix construct is seeded with vascular smooth muscle cells and endothelial cells is implanted to form a valve.